

**REMARKS**

Attached hereto is a Petition and Fee for a Three-Month Extension of Time.

Claims 16-19 are pending in this application. This Amendment amends claim 16. No new matter is added to amended claim 16. Claim 16 is amended to merely clarify the subject matter of the claims and in no way narrows the scope of the claims in order to overcome the prior art or for any other statutory purpose of patentability. Notwithstanding any claim amendments of the present Amendment or those amendments that may be made later during prosecution, Applicants' intent is to encompass equivalents of all claim elements. Reconsideration in view of the foregoing amendments and the following remarks is respectfully requested.

Attached hereto is a marked-up version of the changes made to the claims by the current Amendment. The attached pages are captioned "**Version with markings to show changes made.**"

Claims 16 and 17 stand rejected under 35 U.S.C. §112, second paragraph. Claims 16 and 17 stand rejected under 35 U.S.C. §102(a) as anticipated by JP 06-209120 to Nakamura et al. (hereinafter, Nakamura).

Claims 18 and 19 are withdrawn from present consideration. However, Applicants request reconsideration of the Examiner's Restriction Requirement for all of the reasons discussed in the previous Amendment, and respectfully request consideration of claims 18 and 19.

Applicant respectfully traverses these rejections.

**I. THE CLAIMED INVENTION**

The claimed invention is directed to a method for producing a light-emitting semiconductor device that includes forming a substrate, forming a buffer layer on the substrate, forming an N-layer nitrogen-III Group compound semiconductor satisfying the formula  $Al_xGa_yIn_{1-x-y}N$ , inclusive of  $x = 0$ ,  $y = 0$ , and  $x = y = 0$ , forming a P-layer of P-type nitrogen-III Group compound semiconductor satisfying the formula  $Al_xGa_yIn_{1-x-y}N$ , inclusive of  $x = 0$ ,  $y = 0$ , and  $x = y = 0$ , and forming between the N-layer and the P-layer a middle layer of nitrogen-III Group compound semiconductor satisfying the formula  $Al_xGa_yIn_{1-x-y}N$

inclusive of  $x = 0$ ,  $y = 0$ , and  $x = y = 0$ , the middle layer being doped with a P-type dopant.

## **II. THE PRIOR ART REJECTION**

The present Office Action rejects claims 16 and 17 under 35 U.S.C. §102(a) as anticipated by JP 06-209120 to Nakamura. While Applicants' invention is clearly not taught or suggested by any of the prior art of record, including Nakamura JP '120, to speed prosecution, Applicants respectfully render moot the rejection by filing, herewith, a certified English translation of claimed foreign priority document Japanese Patent Application No. H06-113484, which was filed on April 28, 1994. That is, Nakamura JP '120 has an effective date for prior art purposes of July 26, 2002, which is not before two (2) of the underlying three (3) priority documents from which the present application claims priority.

Please note that the present invention claims priority to three documents: (1) Japanese Application No. H06-76514, filed on March 22, 1994; (2) Japanese Application No. H06-113484, filed on April 28, 1994; and (3) Japanese Application No. H06-197914, filed on July 28, 1994.

Further, it is noted that Japanese Application No. H06-113484, for which the certified English translation is provided, claims priority to its parent application, Japanese Application No. H06-76514 filed on March 22, 1994, and includes all of the characteristics described in the parent application.

With respect to Japanese Application No. H06-197914, which is the third of the claimed priority documents of the present application, an English translation is not provided because the filing date of Japanese Application No. H06-197914 does not antedate Nakamura.

Withdrawal of the rejection of claims 16 and 17 under 35 U.S.C. §102(a) as anticipated by JP 06-209120 to Nakamura is respectfully solicited.

## **III. THE 35 U.S.C. §112, SECOND PARAGRAPH, REJECTION**

Claims 16 and 17 stand rejected under 35 U.S.C. §112, second paragraph. Applicants respectfully submit that independent claim 16 has been amended, above, to overcome this rejection.

In particular, claim 16 now recites the range for the variables x and y for the formulas of the P-layer, corresponding to the fourth claim element, and the middle layer, corresponding to the fifth claim element, i.e., "forming a P-layer of P-type nitrogen-III Group compound semiconductor satisfying the formula  $Al_xGa_yIn_{1-x-y}N$ , inclusive of  $x=0$ ,  $y=0$ , and  $x=y=0$ ; and forming between said N-layer and said P-layer a middle layer of nitrogen-III Group compound semiconductor satisfying the formula  $Al_xGa_yIn_{1-x-y}N$  inclusive of  $x=0$ ,  $y=0$ , and  $x=y=0$ , said middle layer being doped with a P-type dopant."

In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw this rejection.

#### IV. CONCLUSION

In view of the foregoing, Applicant submits that claims 16-19, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

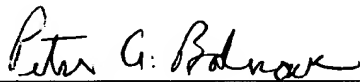
Serial No. 09/783,035  
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The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

Date: 11/26/02

  
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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE CLAIMS:**

**Please amend claim 16 as follows:**

16. (Amended) A method for producing a light-emitting semiconductor device, said method comprising:
- forming a substrate;
  - forming a buffer layer on said substrate;
  - forming an N-layer nitrogen-III Group compound semiconductor satisfying the formula  $Al_xGa_yIn_{1-x-y}N$ , inclusive of  $x=0$ ,  $y=0$ , and  $x=y=0$ ;
  - forming a P-layer of P-type nitrogen-III Group compound semiconductor satisfying the formula  $Al_xGa_yIn_{1-x-y}N$ , inclusive of  $x=0$ ,  $y=0$ , and  $x=y=0$ ; and
  - forming between said N-layer and said P-layer a middle layer of nitrogen-III Group compound semiconductor satisfying the formula  $Al_xGa_yIn_{1-x-y}N$  inclusive of  $x=0$ ,  $y=0$ , and  $x=y=0$ , said middle layer being doped with a P-type dopant.